



Pioneer Telephone Cooperative, Inc.
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February 20, 2014

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

RE: Connect America Fund, WC Docket No. 10-90: Technology Transitions, GN Docket No. 13-5

Dear Ms. Dortch:

Pioneer Telephone Cooperative, Inc. submits proposal for the use of IP Transition Experimental funding as outlined in the order, Order Report and Order and Further Notice of Proposed Rulemaking, Proposal for Ongoing Data Initiative, Released January 31, 2014.

The items requested are as outlined below.

A. Statement of Purpose

Pioneer Telephone Cooperative, Inc., an industry leader in rural telecommunications services, is a multi-service corporation providing communications products and services over 10,915 square miles to more than 150,000 customers/members in seventy-six (76) communities encompassing thirty (30) counties in Western Oklahoma. Pioneer provides an array of telecommunications products and services, including Local Telephone Service, High-Speed Internet, Digital TV, Cellular, Long Distance, Wireless Broadband, Security Systems, Business Solutions and Yellow Pages Advertisement. In addition, Pioneer serves 101 schools, 18 libraries, 8 hospitals and other anchor institutions throughout its 76 exchanges. For more information about Pioneer, please visit our website, www.ptci.com.

The large size and diverse service offering affords Pioneer the opportunity to compare the operations of a FTTH network in suburban areas, copper DSL service in rural communities and sub broadband speeds in very rural areas using long reach copper technology. Pioneer also provides fixed broadband service to rural customers beyond the DSL loop length in areas where 700 MHz licenses are available. Our knowledge base and membership relations allow us to use current data (based on past surveys) plus collecting data regarding the customer's experience in seeking to compare the differences in service delivery by technology.

The purpose of the experiment is to compare traditional digital telephony services to IP based telephony services. Pioneer will seek to quantize customer reactions to QoS, call functionality, device interoperability and call completion. We will ask each participant in the experiment to identify if they have disabilities and the services they use the most and gain the most benefits from.

B. Scope

Pioneer has selected areas for the experiment that thus far have proven to be too expensive to serve with conventional VDSL broadband technology. These customers will be asked to participate in the experimental trial. The areas proposed include the following census tract and block numbers. Listed below is the general description of the geographic areas, current services being offered to customer demographics and other determining factors which make this experiment unique by generating empirical data for review.

The experiment will include urban, rural and suburban areas that involve diverse population densities as they relate to the consumer's ability to access education, healthcare and vocational needs. Pioneer already provides tower space for NOAA weather services but recognizes the customer's need for up-to-date weather related information. Census tracks in which the underserved experimental area resides is provided in the table on the next page.

Pioneer Telephone Cooperative, Inc. February 20, 2014 Census Tracks		
		Census Track
Okarche Exchange		
		40017300201
		40017300202
		40073958400
Hennessey Exchange		40073958100
Ringwood Exchange		40093955100
Maps identifying each Census block is included in the construction cost is illustrated in Attachment A		

Pioneer will be able to compare the costs versus benefits of providing these IP based services against the FTTH service delivery medium. By virtue of Pioneer's large service area, the opportunity exists to invite customers outside the experiment area to provide test data that can be compared to the test data in the controlled area. The primary focus area of the experiment will be customers that are beyond the reach of FTTH or traditional VDSL technology.

C. Technical Parameters and Timeline

Pioneer proposes multiple steps in building a next generation network test bed. This will include the following:

1. Creation of an ENUM database for use during the experiment and beyond. The ENUM will be connected to the newly installed Genband 2000 softswitch
2. Coordination of direct IP interconnection with other providers in the area such as LEC, CATV or Wireless providers. This will enable a broad range of connectivity bypassing the traditional TDM network
3. Make routing and database changes to take advantage of the direct IP interconnections
4. Validating 911/PSAP, local fire, police and hospital services using VoIP. Pioneer will work with entities having IP interface capabilities and making conversion to test operations
5. Verifying the implementation from a cyber-security perspective

6. Initializing the collection of metrics to track VoIP QoS in different bandwidth scenarios throughout the network
7. Reaching out to new customers in the selected tracts/blocks and contacting existing customers receiving new services to participate in the experiment
8. Implementing VoIP over DSL, FTTH and Wireless
9. Working with vendors, doctors and hospitals to validate inner operability with medical devices, fax machines, security alarm systems, alerts and monitoring systems in a VoIP environment
10. Collecting additional metrics via monthly questionnaires to clients participating in the experiment through the web or mail
11. Develop a six (6) month initial analysis of results to fine-tune operations for months 7-12

Our current belief is that there will be no need for Regulatory Relief or Authorizations. Tribal Engagement is not needed due to the areas selected. However, the Native Tribes will be contacted during the experimental process to identify areas where IP tests can be conducted and included in the overall results.

D. Other Governmental Entities

Pioneer has numerous local and county jurisdictions within the geographical areas of the experiment. While their offices do not reside in the areas where the funding will be provided, they do deliver services to those consumers. These agencies will be encouraged to participate in the experiment.

E. Public Safety

Pioneer will ensure that all public safety facilities remain intact regarding reliability and functions as currently being offered. No NG911 services are offered within the test area to date. Pioneer will continue with the experiment to maintain safeguards to ensure public safety functionality continues during adverse conditions and that essential communications services for safety of life and national security are maintained. Backup power systems will continue to meet requirements as well and Pioneer will continue to meet the outage reporting and CLEA requirements

F. Presumptions

Pioneer will work to maintain network reliability following best practices during the experiment. Pioneer will continue to support emergency alert and public safety priority services at the current level as offered by the existing network.

G. Universal Access

Pioneer will maintain its requirement to provide services to persons with disabilities and the experiment will not jeopardize their access to communications. Pioneer will protect the interest of specific vulnerable populations, maintain Universal Service Status Quo, and preserve and enhance broadband access within the experiment area.

H. Competition

Pioneer will continue its wholesale arrangement and make sure that the experiment will have no impact on the wholesale customers and ensure that no customers are penalized as a result of the experiment. Pioneer will maintain intercarrier compensation and interconnection requirements to safeguard customer functionality is equivalent to the service levels as provided prior to the experiment.

I. Consumer Protection

Pioneer will hold to its current customer protection policies and will ensure that customer privacy, truth in billing, slamming, cramming, local number portability and routing will be maintained at the same level as prior to the experiment.

J. Customer Notice for Service-Based Experiments

Pioneer understands that it is critical to provide a proper, adequate and clear understanding of the experiment and the obligations that are placed on the customers, who elect to participate in the plan. Pioneer will convey to the customer the following:

- Customers may opt in or opt out of the experiment after it has begun;
- Timing of any changes;
- Features of the provider's existing technology will no longer be available on the new technology and how that may impact third-party devices and services the customer uses (e.g., medical monitoring services);
- Provider's services will change including any differences in prices, terms and conditions;
- Availability of experiment information as it relates to the customer experience;
- Any other details regarding the experiment that will be of relevance to customers.

K. Data Collection and Reporting Expectations

Pioneer will collect data and develop reports, which are timely and useful to evaluate the experimental and non-experimental areas. The data will include survey from

customers regarding their satisfaction with the experimental technology. The data collection will also include, but is not limited to the following:

During the experiment sign up process, Pioneer will supply a survey to each customer participating in the experimental inquiring if they have disabilities, their ethnic background, their age and if the customer resides on tribal lands.

Pioneer will track customer satisfaction using the current DART (Dispatch, Assignment, Repair & Test) system in which customer complaints, response times and diagnosis of trouble tickets are logged. Members of the network operations and maintenance team will include extra questions in the queue to ensure that incidents of IP issues are captured and made available for review.

Pioneer will place all customers with in the experiment area inside a control group and will measure their satisfaction against the satisfaction levels of traditional service customers with the same demographics and terrain. Satisfaction level will also be initiated with a control set of customers and demographics ranging from suburban and rural communities spread across the entire company service area.

Data is collected weekly from the automated system. Software will be developed to cross reference the data by time and technology. The data will be kept for one year and will be made available for further analysis by the commission if requested. However, before being released by any party, Pioneer will ensure no CPNI data is made available or derived from the data provided.

Pioneer will submit the report to the FCC on a quarterly basis including any survey and trouble ticket information as generated.

Pioneer, when known, will provide specific data concerning disabled consumers' access to the network throughout the experiment. This will include any descriptions of challenges and improvements that have been made resulting from the experiment/customer experience.

Pioneer will maintain traffic records for the interconnection of IP facilities as well as existing SS7 trunks. This data will also be analyzed and compared to existing agreements. The data will include copies of agreements, request for agreements, time to reach agreements and issues disputed during the negotiations.

Pioneer will measure the transition impact of government functions as currently being performed versus the impact experienced during the experimental process.

Pioneer has a network management system, with the capability to record information such as latency jitter packet loss and data rate. Pioneer will use the system to conduct sample measurements throughout the experiment in monitoring the network functions and ensuring the service objectives of the network are met.

Pioneer's backbone IP network is currently in place. Additional steps will be made to ensure that backup fail over systems are in place and operational to monitor and improve MTBF and MTTR. Pioneer will outline the network that is currently in place to illustrate that dual-homing, DNS security and redundancy for the complete IP network is available..

Pioneer will identify the differences in what services are available to customers that participate in the experiment and what services are available outside of the experiment.

L. Cost for Experiment:

Pioneer proposes the cost to complete the experiment to be the following:

Pioneer Telephone Cooperative, Inc. February 20, 2014 Total Experiment Cost		
	Unit Total	Section Total
VDSL Equipment for new area	<u>\$1,429,000</u>	
Total VDSL Equipment		\$1,429,000
ENUM - Switching Equipment		
Upfront Costs for System and Implementation	\$176,000	
Monthly recurring costs for one (1) year (\$2,500 x 12)	\$25,000	
Interconnection to new carriers for one (1) year	\$30,000	
	<u>\$10,000</u>	
Total ENUM		\$241,000
Software		
Developing additional software for NMS	\$10,000	
Developing additional software for DART	<u>\$8,000</u>	
Total Developmental System Software		\$18,000
Surveys		
Data analysis and storage for one (1) year	\$16,000	
Reporting to FCC for one (1) year	<u>\$16,000</u>	
	<u>\$15,000</u>	
Total Survey and Analysis		\$47,000
Total Experiment Costs*		\$1,735,000
Cost over and above the existing currently received.		

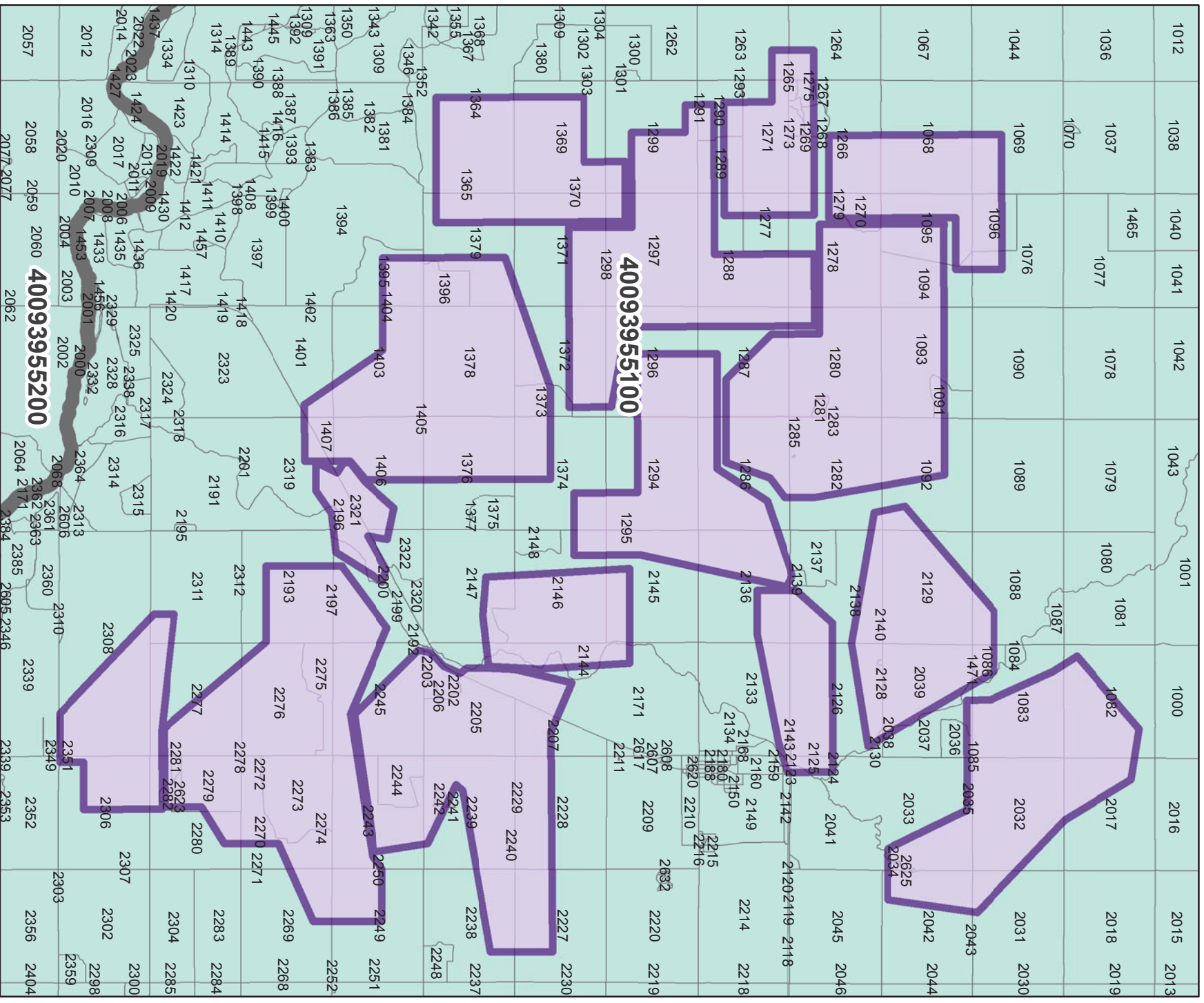
The experimental project as outlined above shall meet the FCC goals to collect sufficient IP Transaction data to assist in the further development of other national projects.

Respectfully Submitted,


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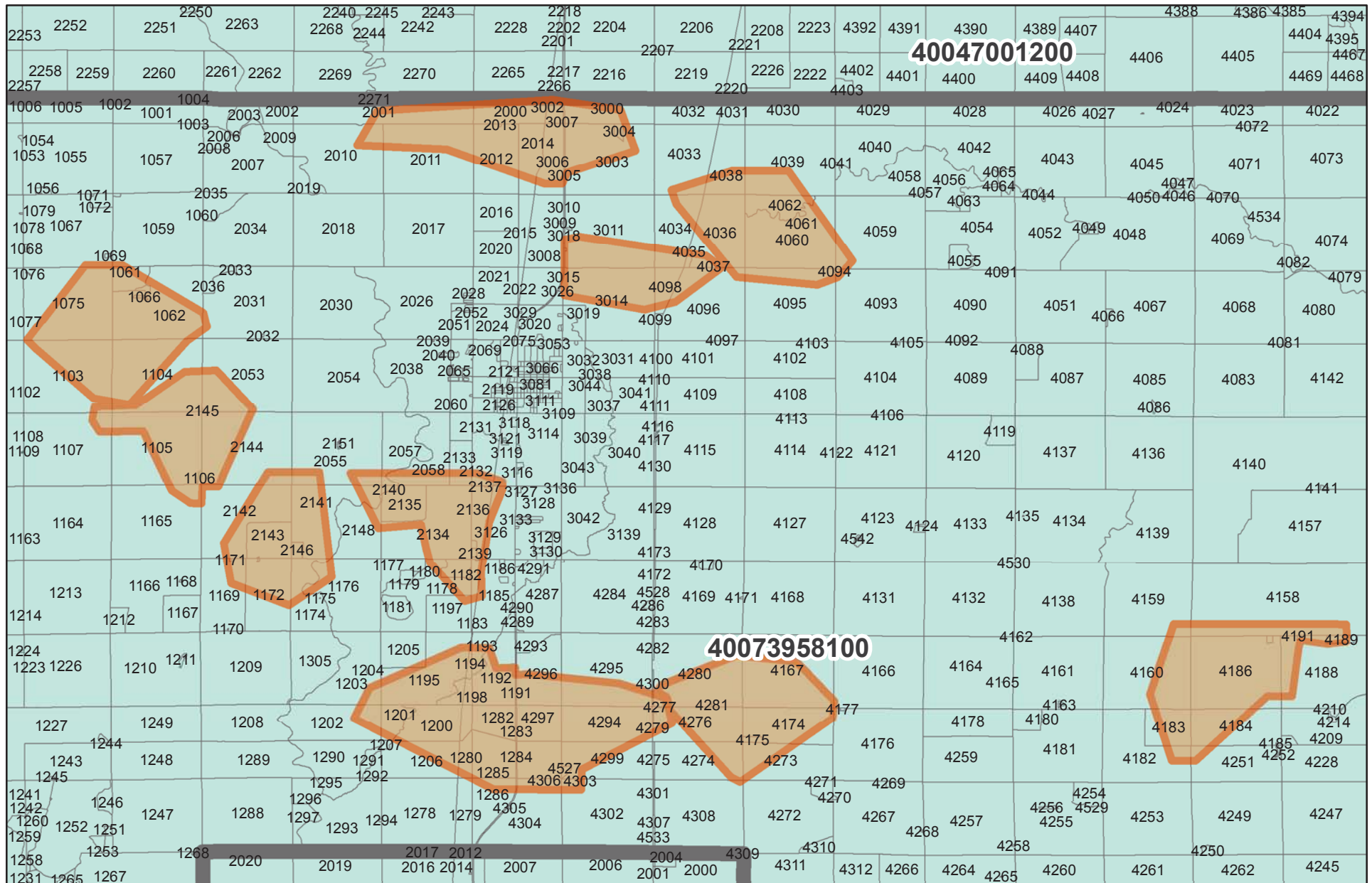
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Attachment A – (Pages 1-3)



RINGWOOD CENSUS BLOCKS FOR CENSUS TRACT 40093955100

ATTACHMENT A (1 OF 3)



HENNESSEY CENSUS BLOCKS FOR CENSUS TRACTS 40073958100

ATTACHMENT A (3 OF 3)



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